

CLAIMS

1. A system for displaying images with the aid of a spatial light modulator characterized in that it
5 comprises:
- a light source (1) emitting an illumination beam;
 - a spatial light modulator (2) comprising a matrix of pixels controlled by video control signals corresponding to a succession of image frames to
10 be displayed;
 - a matrix filter (3) formed of a mosaic of elementary filters of various colors, illuminated by said illumination beam and transmitting a spatially filtered color beam to the spatial light
15 modulator (2),
 - means for producing an image of said filter on an entrance face of the spatial light modulator;
 - means of displacement for displacing said image of the filter (3) on the entrance face of the spatial
20 light modulator (2) and
 - a device (5) for controlling these means of displacement, making it possible to control at least one sequence of displacements of the image of the filter during each image frame.
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2. The system for displaying images as claimed in claim 1, characterized in that the dimensions and the position of each elementary filter are adapted so that the image of each of them on the entrance face of the
30 spatial modulator (2) covers a plurality of pixels.
3. The system for displaying images as claimed in claim 3, characterized in that each displacement of a sequence corresponds to a multiple of the dimension of
35 the image of an elementary filter on the entrance face of the spatial modulator (2).
4. The system for displaying images as claimed in claim 3, characterized in that said mosaic is

monodimensional and includes only one column of elementary filters of various colors.

5 5. The system for displaying images as claimed in claim 3, characterized in that said mosaic is bidimensional and in that said elementary filters are arranged in several rows and several columns.

10 6. The system for displaying images as claimed in claim 5, characterized in that said mosaic is formed by the repetition of blocks of elementary filters, and in that these blocks exhibit identical contours and are each composed of at least two elementary filters of different colors.

15 7. The system for displaying images as claimed in claim 6, characterized in that said mosaic is an assemblage of identical patterns each comprising the same number of blocks and the same number of elementary filters of each color in each of the rows and in each of the columns of said pattern.

25 8. The system for displaying images as claimed in any one of claims 6 to 7, characterized in that each sequence of displacements of the image of the filter on the entrance face of the spatial light modulator allows the successive illumination of each pixel of the spatial light modulator by all the elementary filters of one and the same block.

30 9. The system for displaying images as claimed in claim 8, characterized in that, during each image frame, each pixel of the spatial light modulator is illuminated successively by all the elementary filters of a first block under the effect of a first sequence of displacements, then by all the elementary filters of at least one second block under the effect of at least one second sequence of displacements.

10. The system for displaying images as claimed in one of claims 5 to 9, characterized in that all the sequences of displacements controlled by said control device (5) are adapted so that the integration of the
5 images of the filter that are obtained over the set of displacements of the sequence or sequences of each frame imparts a white colorimetry to the entrance face of the spatial light modulator (2).

10 11. The system for displaying images as claimed in claim 10 when it depends on claim 9, characterized in that said first and at least second sequences of displacements are adapted so that the integration of
15 the images of the filter that are obtained over the set of displacements of any one of these sequences imparts a nonwhite colorimetry to the entrance face of the spatial light modulator (2).

20 12. The system for displaying images as claimed in claim 10, characterized in that said control device possesses the characteristics of a plurality of different sequences of displacements making it possible to impart a white colorimetry to the entrance face of the spatial light modulator and in that it selects,
25 from among this plurality, different sequences for successive frames.